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RESEARCH MEMORANDUM

TABULATED PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS MEASURED IN FLIGHT ON THE WING OF THE D-558-I RESEARCH AIRPLANE THROUGH A MACH NUMBER RANGE OF 0.80 TO 0.89 AND THROUGHOUT THE NORMAL-FORCE-COEFFICIENT RANGE AT MACH NUMBERS OF 0.61, 0.70, 0.855, AND 0.88

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Langley Field, Va.

NATIONAL ADVISORY COMMITTEE FOR AERONAUTICS

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SUMMARY

Tabulated pressure coefficients and aerodynamic characteristics obtained in flight from pressure distributions over six chordwise rows of orifices on the right wing of the D-558-I research airplane (BuAero No. 37972) are presented. The data were obtained through a Mach number range of 0.80 to 0.89 and throughout the normal-force-coefficient range at Mach numbers of 0.61, 0.70, 0.855, and 0.88. This paper supplements similar tabulated data which have been presented in NACA RM L50J10 and NACA RM L50L12a.

INTRODUCTION

As part of the National Advisory Committee for Aeronautics' high-speed flight-research program, pressure-distribution measurements have been made over six chordwise rows of orifices on the right wing of the Douglas D-558-I research airplane (BuAero No. 37972) to determine the chordwise and spanwise loading at subsonic and transonic Mach numbers.

References 1 and 2 have presented tabulated pressure coefficients and aerodynamic characteristics obtained from some maneuvers in the subsonic and transonic regions. The present paper supplements references 1 and 2 and includes data obtained throughout a Mach number range of 0.80 to 0.89 and throughout the normal-force-coefficient range at

Mach numbers of 0.61, 0.70, 0.855, and 0.88. In order that the data may be made available at an early date, no analysis is included.

SYMBOLS

$b/2$ wing semispan (12.5 ft)

$b'/2$ spanwise distance from row 1 to wing tip (10.1 ft)

c local wing chord parallel to plane of symmetry, feet

$\bar{c}$ average chord of wing panel, feet (S'/b')

c' mean aerodynamic chord of the wing panel (5.80 ft) $\left(\frac{2}{S'}\int_0^{b'/2} c^2 dy'\right)$

c_n section normal-force coefficient $\left(\int_0^1 P_R \, d\frac{x}{c}\right)$

$c_{m_{c/4}}$ section pitching-moment coefficient about 0.25-local-chord point $\left(\int_0^1 P_R\left(0.25 - \frac{x}{c}\right) d\frac{x}{c}\right)$

c_m section pitching-moment coefficient about a line perpendicular to longitudinal axis of airplane, passing through the 0.25c' $\left(\int_0^1 P_R\left(\frac{0.50c - 0.25c'}{c} - \frac{x}{c}\right) d\frac{x}{c}\right)$

x_{cp} wing panel chordwise center of pressure, percent c'

y'_{cp} wing panel lateral center of pressure, percent b'/2

C_{N_A} airplane normal-force coefficient $\left(\frac{Wn}{qS}\right)$

$C_{N'}$ wing panel normal-force coefficient $\left(\int_0^1 c_n \frac{c}{\bar{c}} d\frac{2y'}{b'}\right)$

$C_{B'}$ wing panel bending-moment coefficient about row 1 $\left(\int_0^1 c_n \frac{c}{\bar{c}} \frac{2y'}{b'} d\frac{2y'}{b'}\right)$

$C_{M'}$ wing panel pitching-moment coefficient about the 0.25c' $\left(\frac{\bar{c}}{c'} \int_0^1 c_m \left(\frac{c}{\bar{c}}\right)^2 d\frac{2y'}{b'}\right)$

g acceleration due to gravity, 32.2 feet per second^2

M free-stream Mach number

n normal load factor

p local static pressure, pounds per square foot

p_l local static pressure on lower wing surface, pounds per square foot

p_o free-stream static pressure, pounds per square foot

p_u local static pressure on upper wing surface, pounds per square foot

P pressure coefficient $\left(\frac{p - p_o}{q}\right)$

P_R resultant pressure coefficient $\left(\frac{p_l - p_u}{q}\right)$

q free-stream dynamic pressure, pounds per square foot

S total wing area, including area projected through fuselage (150 sq ft)

$S'/2$ area of a single wing panel outboard of row 1 (57.5 sq ft)

W airplane weight, pounds

x chordwise distance rearward of leading edge, feet

y spanwise distance outboard of airplane center line, feet

y' spanwise distance outboard of row 1, feet

δa_R deflection of right aileron, degrees

DESCRIPTION OF AIRPLANE AND TEST PANEL

The Douglas D-558-I research airplane used in these tests is shown in figure 1. A three-view drawing of the airplane showing the general over-all dimensions is shown in figure 2. Other pertinent dimensions are given in the symbols.

The airplane has an untwisted, 10-percent-thick wing with a taper ratio of 0.54, an aspect ratio of 4.17, and an incidence angle of 2°. The 50-percent-chord line is perpendicular to the longitudinal axis of the airplane. An NACA 65-110 airfoil section is employed at all wing stations. Table I gives the ordinates of the airfoil section. A smooth finish over the wing was maintained throughout the tests.

The test panel for which pressure-distribution data are presented is the part of the right wing of the airplane outboard of wing section 28.75 inches.

INSTRUMENTATION

Standard NACA instruments were used to record airspeed, altitude, normal acceleration, aileron position, rolling angular velocity, and yaw angle. The airspeed head was mounted on a boom, the static vents of which were located 1 chord ahead of the right wing tip. Wing resultant and individual pressures were measured by two NACA 60-cell recording manometers. All instruments were synchronized by a common timer.

Flush-type orifices installed in the right wing skin were connected to the instrument compartment by $\frac{1}{8}$-inch inside-diameter aluminum tubing. Three-sixteenth-inch inside-diameter rubber tubing was used between the aluminum tubing and the manometer cells. The average length of aluminum tubing varied from approximately 8 feet at the root station to approximately 18 feet at the tip station. Approximately 4 feet of rubber tubing were used on each line.

The orifices were arranged in six chordwise rows, the chordwise and spanwise locations of which are shown in table II. Row 1 was located at wing station 28.75, the inboard boundary of the wing panel. Wherever possible, the orifices on the lower surface were located directly below the corresponding orifices on the upper surface; however, structural difficulties made this impossible in several cases. Errors due to location of orifices were considered to be negligible.

ACCURACY

The accuracy of the results is estimated to be within the following limits:

Mach number	±0.01
P and P_R	±0.02
c_n	±0.03
$c_{m_{c/4}}$	±0.006

TESTS

The data presented herein were obtained from two speed runs through a Mach number range of 0.80 to 0.89, from gradual pull-ups at Mach numbers of 0.88 and 0.855, and from wind-up turns at Mach numbers of 0.70 and 0.61. The speed runs, the pull-ups, and the wind-up turns were started at altitudes around 35,000 feet. To perform the wind-up turn, the airplane was entered into a gradual right turn which was tightened until the airplane stalled. During the turn the Mach number was held approximately constant and the ailerons were held near neutral.

METHODS

The section of the right wing outboard of row 1, table II(b), is treated as an isolated panel, and the coefficients obtained from integration of the pressure distributions are based upon its geometric properties. The wing-fuselage fairing includes the leading edge of row 1; however, the section load computations are based upon the chord of row 1 excluding the fairing.

The pressure differential between the lower and upper wing surfaces was measured at rows 1, 2, 3, 4, and 6. The upper and lower surface pressures were measured separately at row 5 relative to the instrument compartment pressure. The instrument compartment pressure was measured relative to the boom static pressure, which was corrected to free-stream static pressure by use of the radar tracking method of reference 3. Ground checks showed that lag in the pressure system was negligible for the rates of change of pressure encountered in these tests.

Distributions were selected at intervals in Mach number of approximately 0.01 during the speed run and at intervals in normal-force

coefficient of approximately 0.1 during the pull-ups and wind-up turns. All test points were selected at low aileron deflections (less than $\pm 1^{\circ}$) and at low rolling velocities (less than 0.2 radian per sec).

Section aerodynamic characteristics were obtained by mechanical integration of the chordwise pressure distributions. Panel aerodynamic characteristics were obtained by mechanical integration of spanwise distributions of loads and moments.

PRESENTATION OF DATA

The measured pressure coefficients and the calculated section and wing-panel characteristics are presented through a Mach number range of 0.80 to 0.89 in table III and throughout the normal-force-coefficient range at Mach numbers of 0.61, 0.70, 0.855, and 0.88 in tables IV, V, VI, and VII, respectively. Pressure coefficients are not presented for all the orifices, because some of the cells were inoperative and some of the orifices were not connected.

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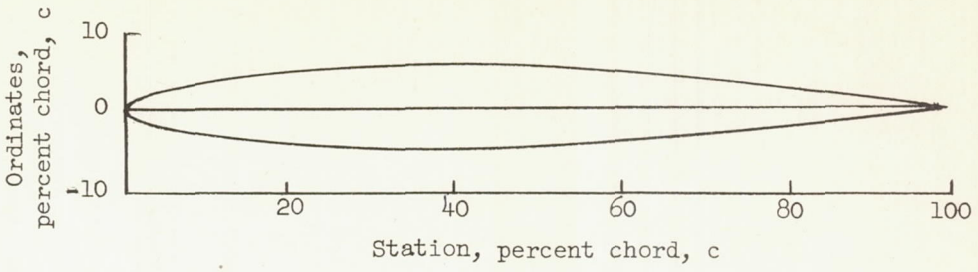
REFERENCES

1. Keener, Earl R., and Pierce, Mary: Tabulated Pressure Coefficients and Aerodynamic Characteristics Measured in Flight on the Wing of the Douglas D-558-I Airplane for a 1g Stall, a Speed Run to a Mach Number of 0.90, and a Wind-Up Turn at a Mach Number of 0.86. NACA RM L50J10, 1950.

2. Keener, Earl R., Peele, James R., and Woodbridge, Julia B.: Tabulated Pressure Coefficients and Aerodynamic Characteristics Measured in Flight on the Wing of the Douglas D-558-I Airplane Throughout the Normal-Force-Coefficient Range at Mach Numbers of 0.67, 0.74, 0.78, and 0.82. NACA RM L50L12a, 1951.

3. Zalovcik, John A.: A Radar Method of Calibrating Airspeed Installations on Airplanes in Maneuvers at High Altitudes and at Transonic and Supersonic Speeds. NACA Rep. 985, 1950. (Formerly NACA TN 1979.)

TABLE I.- PROFILE AND ORDINATES OF THE AIRFOIL SECTION



NACA 65-110

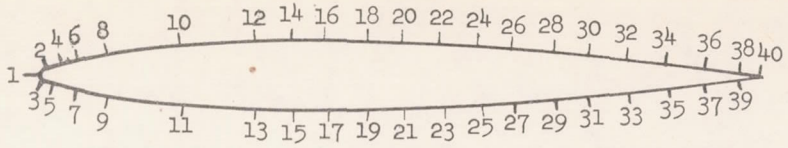
[Stations and ordinates given in percent of airfoil chord]

Upper surface		Lower surface	
Station	Ordinate	Station	Ordinate
0	0	0	0
.468	.796	.532	-.746
.714	.966	.786	-.896
1.209	1.222	1.291	-1.114
2.454	1.666	2.546	-1.480
4.949	2.334	5.051	-2.018
7.447	2.858	7.553	-2.434
9.947	3.299	10.053	-2.781
14.949	4.003	15.051	-3.329
19.954	4.541	20.046	-3.745
24.961	4.951	25.039	-4.055
29.968	5.246	30.032	-4.274
34.976	5.439	35.024	-4.409
39.984	5.532	40.016	-4.460
44.992	5.511	45.008	-4.415
50.000	5.364	50.000	-4.260
55.007	5.078	54.993	-3.982
60.013	4.682	59.987	-3.610
65.018	4.197	64.982	-3.167
70.021	3.642	69.979	-2.670
75.023	3.032	74.977	-2.136
80.022	2.385	79.978	-1.589
85.019	1.722	84.981	-1.048
90.014	1.069	89.986	-.551
95.007	.464	94.993	-.148
100.000	0	100.000	0

L. E. radius: 0.687
Slope of radius through L. E.: 0.042

TABLE II.- LOCATION OF PRESSURE-MEASURING ORIFICES

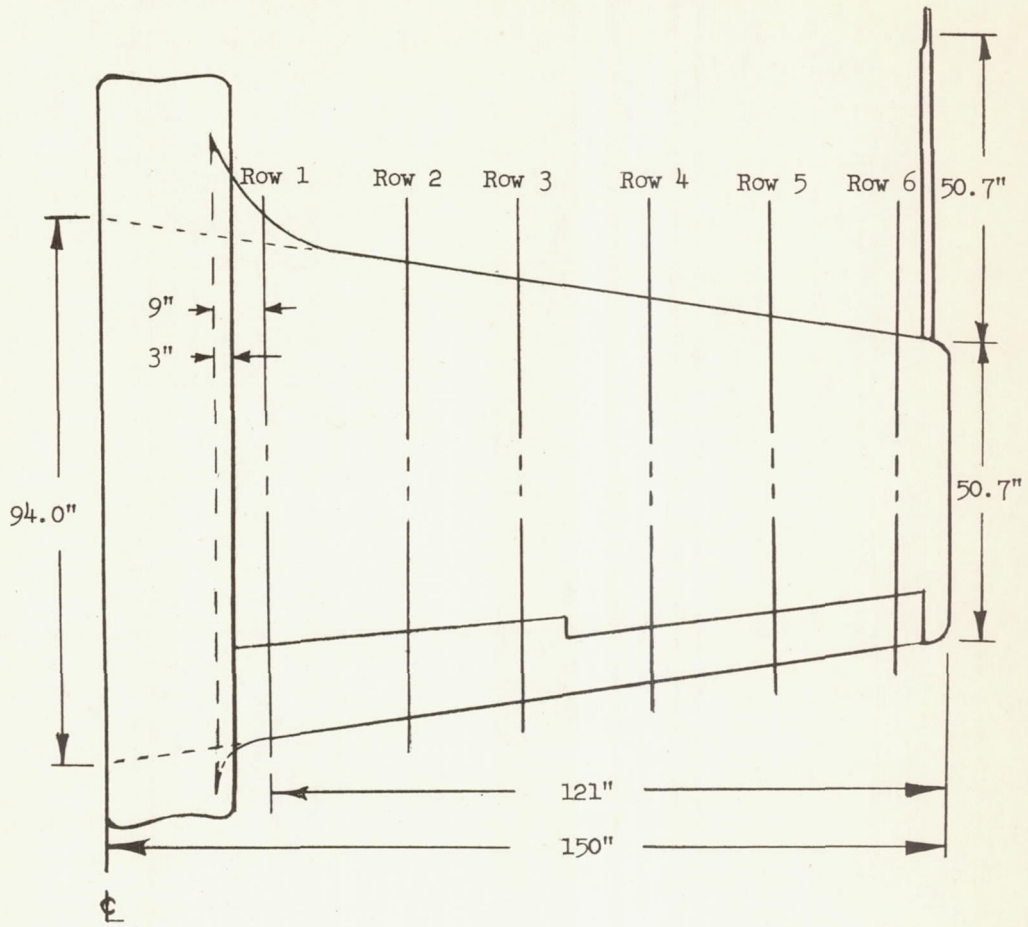
(a) Chordwise location



Orifice location, percent chord													
Upper surface							Lower surface						
Orifice	Row 1	Row 2	Row 3	Row 4	Row 5	Row 6	Orifice	Row 1	Row 2	Row 3	Row 4	Row 5	Row 6
2	1.7	1.4	1.3	1.3	1.0	1.4	1	0.1	0	0	0	0	0
4	3.7	3.0	3.1	3.1	3.0	3.2	3	1.5	1.8	1.8	1.5	1.2	1.4
6	5.6	4.7	4.9	5.1	5.0	4.9	5	3.2	3.4	3.3	3.5	3.0	2.9
8	7.3	8.9	8.9	9.1	9.0	9.0	7	4.9	5.0	5.3	5.1	5.0	5.2
10	20.2	17.0	19.9	20.0	19.9	20.4	9	9.1	8.9	9.0	9.1	9.0	8.5
12	27.1	28.5	28.3	28.3	28.3	----	11	21.2	17.5	20.4	20.7	19.9	21.6
14	35.4	35.0	34.8	35.0	35.1	----	13	----	28.5	28.6	28.1	28.1	28.5
16	38.8	38.5	38.6	38.9	39.1	----	15	35.2	----	----	33.9	----	33.0
18	46.3	46.0	45.8	46.7	46.4	----	17	----	38.6	38.7	39.1	39.0	39.9
20	49.0	50.4	50.1	50.2	50.4	----	19	46.0	46.0	45.8	46.4	46.4	46.0
22	55.0	54.6	----	55.6	55.4	----	21	48.8	----	50.6	50.8	52.0	50.9
24	----	60.0	60.0	60.0	60.4	60.5	23	56.9	55.3	55.0	----	55.6	55.4
26	65.0	64.8	64.9	65.0	65.1	65.5	25	61.3	60.0	60.1	60.2	60.2	60.8
28	70.7	70.0	70.1	69.8	70.3	70.2	27	66.2	64.6	65.2	65.4	65.2	----
30	75.6	74.8	----	75.4	75.1	75.4	29	70.7	70.0	70.0	70.8	70.3	70.5
32	80.8	79.8	79.7	----	80.0	----	31	75.1	75.2	74.9	75.0	75.3	75.6
34	85.1	85.0	84.8	----	86.2	86.1	33	80.8	80.0	79.8	----	80.4	----
36	90.2	90.0	----	89.5	90.6	90.2	35	85.0	84.7	84.9	----	85.9	86.1
38	95.5	95.0	94.8	95.2	95.8	95.2	37	89.9	90.0	89.8	89.8	90.4	90.4
40	98.8	98.8	----	98.6	98.8	98.3	39	95.3	95.0	94.6	94.6	95.8	94.5

TABLE II.- LOCATION OF PRESSURE-MEASURING ORIFICES - Concluded

(b) Spanwise location



Orifice row	1	2	3	4	5	6
Distance from airplane ℄, percent b/2	19.2	36.0	49.3	64.4	77.7	94.0
Distance from row 1, percent b'/2	0	20.9	37.4	56.0	72.4	92.5
Chord length, c, feet	7.54	6.55	6.09	5.52	5.02	4.46

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TABLE III.- TABULATION OF PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF THE D-558-I WING; SPEED RUN AT $C_{N_A} = 0.25 \pm 0.03$

(a) M = 0.800; $C_{N_A} = 0.269$; $\delta_{a_R} = 0.1^\circ$ up

Orifice	Pressure coefficients						
	Row 1	Row 2	Row 3	Row 4	Row 5		Row 6
					Upper	Lower	
1	-------	-------	-------	-------	------	1.100	-------
2-3	0.735	0.855	0.928	0.828	-0.465	.429	0.935
4-5	.550	.770	.619	.770	--.515	.312	.914
6-7	.523	.701	.619	.633	-.479	.212	.429
8-9	.325	.578	.660	.619	-.567	.044	.338
10-11	.303	.213	.523	.481	-.702	-.163	.316
12-13	-------	.413	.503	.550	-.597	-.251	-------
14-15	.476	-------	-------	.440	-.637	-----	-------
16-17	-------	.437	.459	.482	-.740	-.292	-------
18-19	.468	.447	.454	.220	-.823	-.383	-------
20-21	.501	-------	.583	.426	-.699	-.307	-------
22-23	.360	.364	-------	-------	-.440	-.300	-------
24-25	-------	.076	.096	.041	-.273	-.218	.083
26-27	.083	.039	.055	.113	-.176	-.190	-------
28-29	.041	.036	.058	.028	-.135	-.066	.017
30-31	.034	.033	-------	.021	-.059	-.032	.000
32-33	-------	.076	.000	-------	.002	.037	-------
34-35	.055	.055	.050	-------	.099	.044	.144
36-37	-------	.050	-------	.000	.093	.126	.055
38-39	.025	.028	.036	-------	.209	.206	.007
40	-------	-------	-------	-------	.229	-----	-------

Section aerodynamic characteristics						
c_n	0.272	0.268	0.322	0.289	0.278	0.189
$c_{m_{c/4}}$	-0.0232	-0.0103	-0.0126	-0.0019	0.0006	-0.0039

Panel aerodynamic characteristics		
$C_{N'} = 0.270$ $C_{B'} = 0.117$	$C_{M'} = -0.0077$ $x_{cp} = 27.9$	$y'_{cp} = 43.2$

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TABLE III.- TABULATION OF PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF THE D-558-I WING; SPEED RUN AT $C_{N_A} = 0.25 \pm 0.03$ - Continued

(b) M = 0.820; $C_{N_A} = 0.241$; $\delta_{a_R} = 0.1^\circ$ up

Orifice	Pressure coefficients						
	Row 1	Row 2	Row 3	Row 4	Row 5		Row 6
					Upper	Lower	
1	-------	-------	-------	-------	------	1.107	-------
2-3	0.617	0.671	0.752	0.664	-0.341	.376	0.771
4-5	.463	.643	.482	.617	-.409	.260	.771
6-7	.443	.585	.514	.533	-.401	.155	.370
8-9	.252	.475	.546	.527	-.514	.003	.272
10-11	.244	.154	.414	.405	-.656	-.196	.283
12-13	-------	.373	.450	.493	-.595	-.275	-------
14-15	.445	-------	-------	.386	-.678	-----	-------
16-17	-------	.368	.393	.450	-.774	-.316	-------
18-19	.379	.379	.360	.263	-.819	-.491	-------
20-21	.468	-------	.571	.437	-.793	-.324	-------
22-23	.336	.488	-------	-------	-.861	-.311	-------
24-25	-------	.263	.289	.263	-.363	-.254	.103
26-27	.113	.082	.103	.131	-.176	-.189	-------
28-29	.045	.021	.046	.000	-.106	-.061	.023
30-31	.051	.000	-------	-.051	-.035	-.022	.013
32-33	-------	.045	-.064	-------	.029	.036	-------
34-35	.045	.036	.023	-------	.106	.036	.135
36-37	-------	.062	-------	-.006	.108	.126	.057
38-39	.018	.018	.033	-------	.216	.206	.000
40	-------	-------	-------	-------	.222	------	-------

Section aerodynamic characteristics						
c_n	0.237	0.246	0.289	0.260	0.269	0.174
$c_{m_{c/4}}$	-0.0213	-0.0171	-0.0158	-0.0068	-0.0048	-0.0071

Panel aerodynamic characteristics		
$C_N' = 0.248$ $C_B' = 0.108$	$C_M' = -0.0141$ $x_{cp} = 30.7$	$y'_{cp} = 43.4$

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TABLE III.- TABULATION OF PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF THE D-558-I WING; SPEED RUN AT $C_{N_A} = 0.25 \pm 0.03$ - Continued

(c) M = 0.830; $C_{N_A} = 0.253$; $\delta_{a_R} = 0.1^\circ$ up

Orifice	Pressure coefficients						
	Row 1	Row 2	Row 3	Row 4	Row 5		Row 6
					Upper	Lower	
1	-------	-------	-------	-------	------	1.117	-------
2-3	0.610	0.680	0.741	0.645	-0.317	.392	0.759
4-5	.442	.623	.486	.610	-.390	.286	.766
6-7	.423	.566	.493	.517	-.380	.181	.359
8-9	.251	.478	.535	.548	-.491	.018	.264
10-11	.237	.149	.418	.392	-.628	-.187	.286
12-13	-------	.342	.456	.483	-.591	-.265	-------
14-15	.445	-------	-------	.386	-.679	-----	-------
16-17	-------	.334	.396	.436	-.760	-.312	-------
18-19	.342	.355	.349	.274	-.810	-.436	-------
20-21	.443	-------	.523	.286	-.773	-.374	-------
22-23	.314	.417	-------	-------	-.875	-.299	-------
24-25	-------	.454	.436	.492	-.511	-.237	.149
26-27	.154	.174	.261	.189	-.212	-.181	-------
28-29	.081	.087	.122	.025	-.100	-.057	.022
30-31	.056	.020	-------	-.062	-.019	-.001	.012
32-33	-------	.025	-.120	-------	.043	.043	-------
34-35	.044	.020	.000	-------	.118	.049	.131
36-37	-------	.045	-------	-.006	.126	.155	.055
38-39	.017	.032	.032	-------	.230	.224	.006
40	-------	-------	-------	-------	.242	-----	-------

Section aerodynamic characteristics						
c_n	0.240	0.248	0.302	0.273	0.273	0.185
$c_{m_{c/4}}$	-0.0254	-0.0209	-0.0190	-0.0093	-0.0093	-0.0081

Panel aerodynamic characteristics		
$C_{N'} = 0.256$ $C_{B'} = 0.113$	$C_{M'} = -0.0159$ $x_{cp} = 31.2$	$y'_{cp} = 44.2$

TABLE III.- TABULATION OF PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF THE D-558-I WING; SPEED RUN AT $C_{N_A} = 0.25 \pm 0.03$ - Continued

(d) M = 0.840; $C_{N_A} = 0.260$; $\delta_{a_R} = 0.1^\circ$ up

Orifice	Pressure coefficients						
	Row 1	Row 2	Row 3	Row 4	Row 5		Row 6
					Upper	Lower	
1	-------	-------	-------	-------	-------	1.142	-------
2-3	0.587	0.619	0.675	0.583	-0.254	.380	0.693
4-5	.427	.563	.444	.557	-.339	.280	.723
6-7	.409	.539	.462	.474	-.325	.159	.329
8-9	.223	.438	.492	.510	-.460	.013	.244
10-11	.219	.130	.391	.356	-.611	-.182	.329
12-13	-------	.326	.434	.460	-.595	-.272	-------
14-15	.424	-------	-------	.367	-.674	-----	-------
16-17	-------	.258	.280	.308	-.787	-.448	-------
18-19	.326	.344	.302	.225	-.846	-.511	-------
20-21	.320	-------	.365	.225	-.810	-.485	-------
22-23	.213	.284	-------	-------	-.912	-.526	-------
24-25	-------	.770	.711	.693	-.870	-.218	.327
26-27	.251	.268	.310	.372	-.372	-.171	-------
28-29	.190	.251	.310	.201	-.218	-.046	.064
30-31	.166	.199	-------	.083	-.070	.007	.024
32-33	-------	.071	.047	-------	.049	.049	-------
34-35	.065	.059	.033	-------	.173	.066	.119
36-37	-------	.057	-------	-.012	.140	.157	.052
38-39	.028	.031	.024	-------	.238	.228	.000
40	-------	-------	-------	-------	.256	-----	-------

Section aerodynamic characteristics						
c_n	0.240	0.265	0.310	0.288	0.281	0.232
$c_{m_{c/4}}$	-0.0309	-0.0361	-0.0374	-0.0254	-0.0196	-0.0216

Panel aerodynamic characteristics		
$C_N' = 0.270$ $C_B' = 0.121$	$C_M' = -0.0294$ $x_{cp} = 35.9$	$y'_{cp} = 44.8$

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TABLE III.- TABULATION OF PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF THE D-558-I WING; SPEED RUN AT $C_{N_A} = 0.25 \pm 0.03$ - Continued

(e) M = 0.850; $C_{N_A} = 0.264$; $\delta_{a_R} = 0.1^\circ$ up

Orifice	Pressure coefficients						
	Row 1	Row 2	Row 3	Row 4	Row 5		Row 6
					Upper	Lower	
1	-------	-------	-------	-------	------	1.140	-------
2-3	0.577	0.636	0.693	0.603	-0.246	.393	0.711
4-5	.437	.583	.454	.571	-.330	.300	.746
6-7	.408	.565	.466	.489	-.329	.177	.324
8-9	.228	.440	.507	.518	-.451	.021	.247
10-11	.221	.134	.405	.367	-.603	-.183	.340
12-13	-------	.338	.450	.459	-.602	-.267	-------
14-15	.436	-------	-------	.373	-.661	------	-------
16-17	-------	.270	.303	.315	-.777	-.433	-------
18-19	.326	.338	.291	.245	-.853	-.515	-------
20-21	.319	-------	.373	.198	-.795	-.463	-------
22-23	.161	.274	-------	-------	-.889	-.527	-------
24-25	-------	.734	.664	.588	-.882	-.242	.368
26-27	.259	.291	.315	.359	-.399	-.142	-------
28-29	.216	.282	.333	.268	-.247	-.038	.072
30-31	.186	.245	-------	.174	-.113	.015	.035
32-33	-------	.117	.082	-------	.038	.061	-------
34-35	.087	.086	.068	-------	.184	.073	.122
36-37	-------	.070	-------	.000	.150	.155	.051
38-39	.035	.049	.030	-------	.248	.236	.000
40	-------	-------	-------	-------	.265	-----	-------

Section aerodynamic characteristics						
c_n	0.239	0.276	0.327	0.301	0.285	0.245
$c_{m_{c/4}}$	-0.0322	-0.0409	-0.0422	-0.0316	-0.0226	-0.0251

Panel aerodynamic characteristics		
$C_N' = 0.285$ $C_B' = 0.127$	$C_M' = -0.0337$ $x_{cp} = 36.8$	$y'_{cp} = 44.6$

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TABLE III.- TABULATION OF PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF THE D-558-I WING; SPEED RUN AT $C_{N_A} = 0.25 \pm 0.03$ - Continued

(f) M = 0.860; $C_{N_A} = 0.280$; $\delta a_R = 0.1^\circ$ up

Orifice	Pressure coefficients						
	Row 1	Row 2	Row 3	Row 4	Row 5		Row 6
					Upper	Lower	
1	-------	-------	-------	-------	------	1.142	-------
2-3	0.621	0.714	0.773	0.667	-0.296	.428	0.777
4-5	.475	.632	.504	.526	-.364	.328	.889
6-7	.447	.628	.515	.532	-.355	.210	.389
8-9	.248	.456	.565	.581	-.462	.065	.275
10-11	.291	.179	.438	.403	-.621	-.153	.352
12-13	-------	.391	.492	.497	-.630	-.240	-------
14-15	.456	-------	-------	.396	-.680	-----	-------
16-17	-------	.280	.324	.347	-.780	-.433	-------
18-19	.358	.336	.325	.274	-.875	-.500	-------
20-21	.394	-------	.358	.224	-.836	-.550	-------
22-23	.161	.314	-------	-------	-.912	-.562	-------
24-25	-------	-.041	.347	-.225	-.880	-.589	.246
26-27	.225	.259	.324	.262	-.416	-.209	-------
28-29	.223	.306	.342	.269	-.349	-.036	.114
30-31	.201	.295	-------	.274	-.226	.015	.045
32-33	-------	.230	.063	-------	-.030	.042	-------
34-35	.146	.199	.083	-------	.188	.087	.134
36-37	-------	.172	-------	.166	.129	.151	.045
38-39	.081	.101	.067	-------	.238	.232	.000
40	-------	-------	-------	-------	.244	-----	-------

Section aerodynamic characteristics						
c_n	0.272	0.277	0.326	0.286	0.300	0.235
$c_{m_{c/4}}$	-0.0396	-0.0425	-0.0419	-0.0303	-0.0219	-0.0200

Panel aerodynamic characteristics		
$C_N' = 0.282$ $C_B' = 0.125$	$C_M' = -0.0342$ $x_{cp} = 37.1$	$y'_{cp} = 44.3$

TABLE III.- TABULATION OF PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF THE D-558-I WING; SPEED RUN AT $C_{N_A} = 0.25 \pm 0.03$ - Continued

(g) M = 0.870; $C_{N_A} = 0.244$; $\delta_{a_R} = 0.2^\circ$ up

Orifice	Pressure coefficients						
	Row 1	Row 2	Row 3	Row 4	Row 5		Row 6
					Upper	Lower	
1	-------	-------	-------	-------	------	1.142	-------
2-3	0.597	0.624	0.683	0.572	-0.217	.396	0.677
4-5	.462	.575	.430	.548	-.276	.294	.726
6-7	.430	.527	.467	.468	-.308	.187	.329
8-9	.037	.413	.495	.484	-.419	.062	.237
10-11	.263	.129	.441	.344	-.506	-.174	.328
12-13	-------	.366	.445	.443	-.599	-.244	-------
14-15	.428	-------	-------	.368	-.657	-----	-------
16-17	-------	.256	.295	.328	-.754	-.447	-------
18-19	.317	.290	.274	.237	-.862	-.507	-------
20-21	.318	-------	.314	.194	-.835	-.577	-------
22-23	.138	.253	-------	-------	-.902	-.604	-------
24-25	-------	.129	.296	-.323	-.894	-.652	.108
26-27	.000	-.226	-.127	.017	-.421	-.609	-------
28-29	.215	.269	.282	.220	-.362	-.104	.159
30-31	.215	.318	-------	.247	-.286	-.012	.086
32-33	-------	.280	.213	-------	-.114	.047	-------
34-35	.167	.256	.181	-------	.181	.106	.124
36-37	-------	.213	-------	.285	.106	.154	.034
38-39	.082	.135	.082	-------	.214	.229	-.005
40	-------	-------	-------	-------	.235	-----	-------

Section aerodynamic characteristics						
c_n	0.237	0.236	0.295	0.252	0.268	0.193
$c_{m_{c/4}}$	-0.0328	-0.0383	-0.0328	-0.0299	-0.0193	-0.0149

Panel aerodynamic characteristics		
$C_{N'} = 0.246$ $C_{B'} = 0.109$	$C_{M'} = -0.0294$ $x_{cp} = 37.0$	$y'_{cp} = 44.3$

TABLE III.- TABULATION OF PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF THE D-558-I WING; SPEED RUN AT $C_{N_A} = 0.25 \pm 0.03$ - Continued

(h) M = 0.880; $C_{N_A} = 0.254$; $\delta_{a_R} = 0.5^\circ$ up

Orifice	Pressure coefficients						
	Row 1	Row 2	Row 3	Row 4	Row 5		Row 6
					Upper	Lower	
1	-------	-------	-------	-------	------	1.141	-------
2-3	0.677	0.740	0.796	0.695	-0.275	.462	0.812
4-5	.506	.690	.515	.689	-.359	.265	..893
6-7	.475	.607	.523	.520	-.355	.252	.456
8-9	.290	.509	.577	.520	-.451	.099	.276
10-11	.296	.214	.460	.408	-.617	-.147	.353
12-13	-------	.409	.466	.510	-.625	-.263	-------
14-15	.463	-------	-------	.415	-.682	-----	-------
16-17	-------	.298	.331	.358	-.770	-.424	-------
18-19	.378	.342	.326	.281	-.862	-.479	-------
20-21	.364	-------	.364	.224	-.841	-.550	-------
22-23	.176	.291	-------	-------	-.921	-.566	-------
24-25	-------	-.087	.230	-.332	-.520	-.637	.123
26-27	-.284	-.229	-.072	-.153	-.402	-.658	-------
28-29	.082	-.325	-.174	-.255	-.387	-.228	-.080
30-31	.143	.239	-------	.173	-.341	-.106	.082
32-33	-------	.312	.119	-------	-.233	-.003	-------
34-35	.209	.303	.125	-------	-.060	.094	.122
36-37	-------	.300	-------	.342	-.001	.140	.022
38-39	.153	.206	.084	-------	.127	.205	-.005
40	-------	-------	-------	-------	.150	-----	-------

Section aerodynamic characteristics						
c_n	0.237	0.247	0.269	0.248	0.282	0.197
$c_{m_{c/4}}$	-0.0254	-0.0267	0.0093	-0.0174	-0.0187	-0.0055

Panel aerodynamic characteristics		
$C_N' = 0.250$ $C_B' = 0.110$	$C_M' = -0.0204$ $x_{cp} = 33.2$	$y'_{cp} = 44.0$

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TABLE III.- TABULATION OF PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF THE D-558-I WING; SPEED RUN AT $C_{N_A} = 0.25 \pm 0.03$ - Continued

(i) M = 0.880; $C_{N_A} = 0.22$; $\delta_{a_R} = 0.0^\circ$

Orifice	Pressure coefficients						
	Row 1	Row 2	Row 3	Row 4	Row 5		Row 6
					Upper	Lower	
1	-------	-------	-------	-------	------	1.147	-------
2-3	0.555	0.702	0.758	0.638	-0.222	.472	0.776
4-5	.477	.656	-------	.675	-.307	.361	-------
6-7	.444	.619	-------	.462	-.324	.244	.416
8-9	.385	.495	.579	.505	-.438	.084	.287
10-11	.277	.431	.449	.403	-.547	-.133	.314
12-13	-------	.462	.505	.523	-.612	-.196	-------
14-15	.421	-------	-------	.434	-.647	-----	-------
16-17	-------	.370	.329	.360	-.702	-.423	-------
18-19	.403	.314	.301	.268	-.865	-.484	-------
20-21	.499	-------	.333	.203	-.835	-.549	-------
22-23	-------	.264	.311	-------	------	-.581	-------
24-25	-------	.107	.305	-.348	-.366	-.641	.120
26-27	-.285	-.240	-.117	-.168	-.401	-.669	-------
28-29	-------	-.360	-.255	-.307	-.383	-.637	-------
30-31	.074	.120	-------	-.037	-.348	-.222	.000
32-33	-------	.200	-------	-------	-.235	-.056	-------
34-35	.204	.274	.120	-------	-.140	.079	-------
36-37	.194	.264	-------	.338	-.096	.125	.037
38-39	.157	.190	.083	.268	.029	.181	.006
40	-------	-------	-------	-------	.077	-----	-------

Section aerodynamic characteristics						
c_n	0.226	0.263	0.272	0.232	0.241	0.181
$c_{m_{c/4}}$	-0.0209	-0.0193	-0.0071	-0.0148	-0.0103	-0.0074

Panel aerodynamic characteristics		
$C_N' = 0.238$ $C_B' = 0.100$	$C_M' = -0.0133$ $x_{cp} = 30.6$	$y'_{cp} = 42.0$

TABLE III.- TABULATION OF PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF THE D-558-I WING; SPEED RUN AT $C_{N_A} = 0.25 \pm 0.03$ - Continued

(j) M = 0.883; $C_{N_A} = 0.22$; $\delta a_R = 0.0°$

Orifice	Pressure coefficient						
	Row 1	Row 2	Row 3	Row 4	Row 5		Ros 6
					Upper	Lower	
1	-------	-------	-------	-------	------	1.142	-------
2-3	0.575	0.702	0.741	0.629	-0.211	.461	0.760
4-5	.488	.651	-------	.666	-.287	.350	-------
6-7	.452	.614	-------	.452	-.317	.241	.416
8-9	.392	.497	.570	.494	-.438	.081	.271
10-11	.271	.434	.439	.394	-.536	-.131	.317
12-13	-------	.458	.497	.521	-.608	-.202	-------
14-15	.420	-------	-------	.434	-.637	-----	-------
16-17	-------	.367	.326	.353	-.688	-.438	-------
18-19	.394	.307	.304	.271	-.861	-.480	-------
20-21	.488	-------	.326	.204	-.820	-.547	-------
22-23	-------	.259	.313	-------	------	-.583	-------
24-25	-------	.094	.298	-.376	-.438	-.633	.109
26-27	-.293	-.259	-.105	-.186	-.384	-.669	-------
28-29	-------	-.367	-.271	-.326	-.357	-.641	-------
30-31	-.045	.033	-------	-.376	-.341	-.400	-.134
32-33	-------	.150	-------	-------	-.250	-.113	-------
34-35	.181	.235	.087	-------	-.164	.048	-------
36-37	.184	.244	-------	.331	-.112	.104	.033
38-39	.163	.186	.072	.277	-.014	.155	.005
40	-------	-------	-------	-------	.059	-----	-------

Section aerodynamic characteristics						
c_n	0.213	0.248	0.257	0.192	0.229	0.163
$c_{m_{c/4}}$	-0.0129	-0.0129	-0.0010	0.0055	-0.0068	0.0003

Panel aerodynamic characteristics		
$C_N' = 0.220$ $C_B' = 0.094$	$C_M' = -0.0050$ $x_{cp} = 27.3$	$y'_{cp} = 42.6$

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TABLE III.- TABULATION OF PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF THE D-558-I WING; SPEED RUN AT $C_{N_A} = 0.25 \pm 0.03$ - Continued

(k) M = 0.885; $C_{N_A} = 0.22$; $\delta a_R = 0.0^\circ$

Orifice	Pressure coefficients						
	Row 1	Row 2	Row 3	Row 4	Row 5		Row 6
					Upper	Lower	
1	-------	-------	-------	-------	------	1.131	-------
2-3	0.569	0.738	0.783	0.658	-0.241	.485	0.801
4-5	.488	.685	-------	.712	-.323	.371	-------
6-7	.459	.641	-------	.477	-.335	.259	.459
8-9	.392	.516	.596	.516	-.445	.090	.290
10-11	.292	.450	.463	.415	-.561	-.127	.324
12-13	-------	.486	.509	.534	-.620	-.186	-------
14-15	.436	-------	-------	.450	-.650	-----	-------
16-17	-------	.384	.347	.367	-.686	-.406	-------
18-19	.409	.326	.308	.281	-.865	-.476	-------
20-21	.511	-------	.343	.205	-.828	-.536	-------
22-23	-------	.263	.311	-------	------	-.568	-------
24-25	-------	.018	-------	-.347	-.362	-.621	.116
26-27	-.288	-.254	-.089	-.162	-.406	-.662	-------
28-29	-------	-.356	-.258	-.299	-.372	-.634	-------
30-31	-.093	-.027	-------	-.402	-.376	-.474	-.240
32-33	-------	.142	-------	-------	-.283	-.114	-------
34-35	.185	.231	.068	-------	-.183	.044	-------
36-37	.196	.249	-------	.347	-.125	.099	.048
38-39	.169	.192	.077	.281	-.006	.156	.009
40	-------	-------	-------	-------	.049	------	-------

Section aerodynamic characteristics						
c_n	0.211	0.256	0.262	0.210	0.238	0.160
$c_{m_{c/4}}$	-0.0103	-0.0109	0.0003	0.0006	-0.0029	0.0087

Panel aerodynamic characteristics		
$C_N' = 0.230$ $C_B' = 0.097$	$C_M' = -0.0024$ $x_{cp} = 26.0$	$y'_{cp} = 42.3$

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TABLE III.- TABULATION OF PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF THE D-558-I WING; SPEED RUN AT $C_{N_A} = 0.25 \pm 0.03$ - Concluded

(l) M = 0.888; $C_{N_A} = 0.22$; $\delta a_R = 0.0°$

Orifice	Pressure coefficients						
	Row 1	Row 2	Row 3	Row 4	Row 5		Row 6
					Upper	Lower	
1	-------	-------	-------	-------	------	1.131	-------
2-3	0.601	0.741	0.771	0.657	-0.247	.478	0.781
4-5	.513	.683	-------	.711	-.303	.378	-------
6-7	.471	.639	-------	.473	-.319	.256	.447
8-9	.403	.529	.595	.513	-.445	.098	.272
10-11	.287	.452	.464	.412	-.538	-.124	.322
12-13	-------	.490	.504	.536	-.609	-.177	-------
14-15	.429	-------	-------	.443	-.646	-----	-------
16-17	-------	.389	.350	.368	-.679	-.405	-------
18-19	.415	.324	.307	.280	-.858	-.471	-------
20-21	.508	-------	.342	.207	-.820	-.532	-------
22-23	-------	.259	.312	-------	------	-.567	-------
24-25	-------	.102	-------	.014	-.325	-.620	.114
26-27	-.284	-.242	-.215	-.018	-.370	-.657	-------
28-29	-------	-.356	-.286	-.233	-.366	-.627	-------
30-31	-.166	-.193	-------	-.443	-.382	-.636	-.315
32-33	-------	.114	-------	-------	-.296	-.163	-------
34-35	.166	.175	.242	-------	.254	.019	-------
36-37	.189	.224	-------	.093	-.210	.072	.053
38-39	.154	.175	.067	.061	-.109	.126	.018
40	-------	-------	-------	-------	.019	-----	-------

Section aerodynamic characteristics						
c_n	0.215	0.248	0.260	0.203	0.226	0.140
$c_{m_{c/4}}$	-0.0097	-0.0048	-0.0013	0.0142	-0.0035	0.0132

Panel aerodynamic characteristics		
$C_N' = 0.221$ $C_B' = 0.093$	$C_M' = 0.0016$ $x_{cp} = 24.3$	$y'_{cp} = 42.0$

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TABLE IV.- TABULATION OF PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF THE D-558-I WING; WIND-UP TURN AT $M \approx 0.61$

(a) $M = 0.615$; $C_{N_A} = 0.535$; $\delta_{a_R} = 0.5^\circ$ up

Orifice	Pressure coefficients						
	Row 1	Row 2	Row 3	Row 4	Row 5		Row 6
					Upper	Lower	
1	-------	-------	-------	-------	------	0.294	-------
2-3	2.755	3.404	3.488	3.404	-2.522	.857	2.775
4-5	1.714	3.244	3.182	3.019	-2.367	.735	1.969
6-7	1.530	2.081	1.808	1.765	-1.071	.596	1.139
8-9	1.261	1.265	1.275	1.204	-.840	.388	.792
10-11	.754	-------	.812	.785	-.612	.163	.500
12-13	-------	.694	.714	.685	-.514	.037	-------
14-15	.604	-------	-------	.531	-.489	-----	-------
16-17	-------	.477	.531	.531	-.510	-.004	-------
18-19	.469	.408	.418	.377	-.469	-.041	-------
20-21	.424	-------	.400	.316	-.388	-.051	-------
22-23	.282	.265	-------	-------	-.339	-.071	-------
24-25	-------	.296	.296	.224	-.245	-.051	.163
26-27	.253	.224	.245	.216	-.155	.031	-------
28-29	.163	.163	.196	.214	-.102	.041	.110
30-31	.153	.143	-------	.082	-.051	.041	.082
32-33	-------	.194	-------	-------	-.021	.082	-------
34-35	.112	-------	.110	-------	.112	.051	.194
36-37	-------	.122	-------	.041	.086	.163	.090
38-39	.069	.086	.082	-------	.151	.204	.041
40	-------	-------	-------	-------	.174	-----	-------

Section aerodynamic characteristics						
c_n	0.534	0.594	0.589	0.548	0.535	0.389
$c_{m_{c/4}}$	-0.0058	0.0068	0.0064	0.0142	0.0145	0.0006

Panel aerodynamic characteristics		
$C_N' = 0.538$ $C_B' = 0.229$	$C_M' = 0.0099$ $x_{cp} = 23.2$	$y'_{cp} = 42.5$

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TABLE IV.- TABULATION OF PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF THE D-558-I WING; WIND-UP TURN AT $M \approx 0.61$ - Continued

(b) $M = 0.613$; $C_{N_A} = 0.599$; $\delta a_R = 0.4^\circ$ up

Orifice	Pressure coefficients						
	Row 1	Row 2	Row 3	Row 4	Row 5		Row 6
					Upper	Lower	
1	-------	-------	-------	-------	------	0.188	-------
2-3	3.309	3.566	3.645	3.562	-2.710	.917	2.894
4-5	1.862	3.289	3.372	3.250	-2.492	.765	2.298
6-7	1.548	2.936	2.919	2.886	-1.756	.645	1.579
8-9	1.437	1.417	1.356	1.205	-.962	.441	.947
10-11	.891	-------	.874	.851	-.658	.168	.557
12-13	-------	.739	.769	.729	-.581	.034	-------
14-15	.644	-------	-------	.583	-.531	------	-------
16-17	-------	.506	.571	.587	-.540	-.010	-------
18-19	.516	.435	.435	.405	-.480	-.065	-------
20-21	.461	-------	.397	.354	-.399	-.065	-------
22-23	.291	.273	-------	-------	-.367	-.085	-------
24-25	-------	.304	.294	.243	-.257	-.075	.178
26-27	.251	.243	.255	.231	-.187	-.039	-------
28-29	.172	.182	.215	.162	-.136	.046	.125
30-31	.152	.150	-------	.081	-.065	.026	.125
32-33	-------	.203	-------	-------	-.025	.066	-------
34-35	.132	-------	.109	-------	.097	.026	.233
36-37	-------	.121	-------	.041	.058	.147	.117
38-39	.077	.093	.093	-------	.127	.196	.051
40	-------	-------	-------	-------	.137	-----	-------

Section aerodynamic characteristics						
c_n	0.594	0.656	0.654	0.611	0.583	0.444
$c_{m_{c/4}}$	-0.0006	0.0122	0.0093	0.0242	0.0216	0.0006

Panel aerodynamic characteristics		
$C_N' = 0.593$ $C_B' = 0.252$	$C_M' = 0.0146$ $x_{cp} = 22.5$	$y'_{cp} = 42.4$

TABLE IV.- TABULATION OF PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF THE D-558-I WING; WIND-UP TURN AT $M \approx 0.61$ - Continued

(c) $M = 0.615$; $C_{N_A} = 0.689$; $\delta a_R = 0.4^\circ$ up

Orifice	Pressure coefficients						
	Row 1	Row 2	Row 3	Row 4	Row 5		Row 6
					Upper	Lower	
1	-------	-------	-------	-------	------	0.019	-------
2-3	3.472	3.607	2.986	3.000	-2.286	.954	2.867
4-5	2.738	3.174	2.788	2.759	-2.013	.854	2.698
6-7	1.865	2.759	2.551	2.521	-1.825	.710	2.024
8-9	1.766	2.095	2.242	2.164	-1.564	.497	1.440
10-11	1.055	-------	1.266	1.131	-.806	.249	.675
12-13	-------	.853	.853	.838	-.604	.079	-------
14-15	.730	-------	-------	.603	-.515	-----	-------
16-17	-------	.559	.559	.585	-.525	.044	-------
18-19	.526	.407	.407	.397	-.425	.011	-------
20-21	.468	-------	.349	.337	-.386	-.021	-------
22-23	.286	.258	-------	-------	-.327	-.048	-------
24-25	-------	.288	.268	.238	-.247	-.019	.238
26-27	.246	.218	.238	.202	-.197	.022	-------
28-29	.169	.198	.210	.149	-.126	.051	.198
30-31	.179	.159	-------	.099	-.108	.041	.159
32-33	-------	.228	-------	-------	-.038	.071	-------
34-35	.129	-------	.159	-------	.030	.061	.318
36-37	-------	.167	-------	.099	-.009	.150	.167
38-39	.087	.131	.111	-------	.067	.182	.099
40	-------	-------	-------	-------	.070	-----	-------

Section aerodynamic characteristics						
c_n	0.680	0.718	0.720	0.685	0.675	0.564
$c_{m_{c/4}}$	0.0045	0.0142	0.0155	0.0222	0.0142	-0.0029

Panel aerodynamic characteristics		
$C_N' = 0.671$ $C_B' = 0.292$	$C_M' = 0.0153$ $x_{cp} = 22.7$	$y'_{cp} = 43.5$

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TABLE IV.- TABULATION OF PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF THE D-558-I WING; WIND-UP TURN AT $M \approx 0.61$ - Concluded

(d) $M = 0.613$; $C_{N_A} = 0.761$; $\delta_{a_R} = 0.0^\circ$

Orifice	Pressure coefficients						
	Row 1	Row 2	Row 3	Row 4	Row 5		Row 6
					Upper	Lower	
1	-------	-------	-------	-------	-------	-0.038	-------
2-3	2.460	1.884	2.590	2.828	-1.234	.984	2.640
4-5	2.440	1.780	2.540	2.630	-1.202	.864	2.660
6-7	2.240	1.640	2.392	2.300	-1.166	.770	2.148
8-9	1.976	1.576	2.160	1.960	-1.206	.534	1.552
10-11	1.012	-------	1.240	1.210	-1.058	.254	.810
12-13	-------	1.090	.912	1.024	-.914	.110	-------
14-15	.852	-------	-------	.744	-.786	------	-------
16-17	-------	.808	.636	.740	-.646	.050	-------
18-19	.620	.640	.470	.500	-.436	-.026	-------
20-21	.564	-------	.364	.410	-.436	-.036	-------
22-23	.376	.390	-------	-------	-.406	-.056	-------
24-25	-------	.530	.360	.340	-.366	-.036	.296
26-27	.304	.292	.364	.296	-.286	-.052	-------
28-29	.250	.284	.304	.230	-.266	.034	.244
30-31	.260	.236	-------	.210	-.236	-.006	.200
32-33	-------	.340	-------	-------	-.236	.034	-------
34-35	.330	-------	.264	-------	-.136	.024	.440
36-37	-------	.344	-------	.210	-.150	.084	.212
38-39	.184	.212	.244	-------	-.094	.106	.130
40	-------	-------	-------	-------	-.066	------	-------

Section aerodynamic characteristics						
c_n	0.753	0.746	0.763	0.761	0.713	0.644
$c_{m_{c/4}}$	-0.0270	-0.0467	-0.0171	-0.0100	-0.0235	-0.0187

Panel aerodynamic characteristics		
$C_N' = 0.723$ $C_B' = 0.318$	$C_M' = -0.0242$ $x_{cp} = 28.3$	$y'_{cp} = 44.0$

TABLE V.- TABULATION OF PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF THE D-558-I WING; WIND-UP TURN AT $M \approx 0.70$

(a) $M = 0.702$; $C_{N_A} = 0.487$; $\delta_{a_R} = 0.7^\circ$ up

Orifice	Pressure coefficients						
	Row 1	Row 2	Row 3	Row 4	Row 5		Row 6
					Upper	Lower	
1	-------	-------	-------	-------	------	0.673	-------
2-3	2.203	2.338	2.484	2.342	-1.672	.732	2.311
44-5	1.412	2.203	2.151	2.196	-1.636	.607	2.304
6-7	1.322	1.998	1.978	1.980	-1.517	.392	1.309
8-9	1.126	1.799	1.727	1.746	-1.464	.274	.691
10-11	.662	.378	.561	.567	-.611	.040	.477
12-13	-------	.630	.644	.598	-.579	-.043	-------
14-15	.594	-------	-------	.489	-.554	-----	-------
16-17	-------	.482	.507	.495	-.589	-.118	-------
18-19	.513	.367	.387	.333	-.554	-.201	-------
20-21	.424	-------	.353	.279	-.473	-.167	-------
22-23	.248	.243	-------	-------	-.417	-.176	-------
24-25	-------	.270	.243	.180	-.293	-.149	.144
26-27	.205	.209	.227	.212	-.221	-.122	-------
28-29	.117	.140	.180	.108	-.167	-.023	.097
30-31	.117	.119	-------	.072	-.104	-.032	.072
32-33	-------	.144	-------	-------	-.041	.022	-------
34-35	.099	-------	.097	-------	.103	-.005	.162
36-37	-------	.097	-------	.009	.062	.103	.079
38-39	.054	.054	.072	-------	.141	.166	.036
40	-------	-------	-------	-------	.148	-----	-------

Section aerodynamic characteristics						
c_n	0.471	0.504	0.550	0.492	0.478	0.358
$c_{m_{c/4}}$	-0.0071	0.0064	0.0064	0.0216	0.0232	0.0039

Panel aerodynamic characteristics		
$C_N' = 0.477$ $C_B' = 0.205$	$C_M' = 0.0110$ $x_{cp} = 22.7$	$y'_{cp} = 43.0$

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TABLE V.- TABULATION OF PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF THE D-558-I WING; WIND-UP TURN AT $M \approx 0.70$ - Continued

(b) $M = 0.705$; $C_{N_A} = 0.590$; $\delta_{a_R} = 0.6^\circ$ up

Orifice	Pressure coefficients						
	Row 1	Row 2	Row 3	Row 4	Row 5		Row 6
					Upper	Lower	
1	-------	-------	-------	-------	------	0.590	-------
2-3	2.429	2.535	2.645	2.532	-1.775	.806	2.473
4-5	1.516	2.376	2.432	2.352	-1.747	.673	2.529
6-7	1.543	2.219	2.173	2.148	-1.643	.569	1.904
8-9	1.277	2.000	1.950	1.953	-1.626	.327	.986
10-11	1.082	1.109	1.383	.497	-.527	.070	.532
12-13	-------	.621	.525	.493	-.506	-.031	-------
14-15	.592	-------	-------	.475	-.515	-----	-------
16-17	-------	.475	.507	.496	-.541	-.073	-------
18-19	.496	.399	.417	.364	-.541	-.151	-------
20-21	.429	-------	.390	.311	-.462	-.134	-------
22-23	.255	.249	-------	-------	-.407	-.160	-------
24-25	-------	.275	.257	.195	-.284	-.134	.156
26-27	.220	.132	.223	.234	-.213	-.107	-------
28-29	.142	.110	.188	.133	-.160	-.018	.138
30-31	.133	.117	-------	.071	-.098	-.027	.099
32-33	-------	.178	-------	-------	-.036	.053	-------
34-35	.107	-------	.095	-------	.088	-.001	.204
36-37	-------	.106	-------	.044	.054	.115	.110
38-39	.053	.064	.082	-------	.150	.193	.044
40	-------	-------	-------	-------	.150	-----	-------

Section aerodynamic characteristics						
c_n	0.563	0.595	0.654	0.548	0.541	0.432
$c_{m_{c/4}}$	-0.0010	0.0164	0.0177	0.0258	0.0290	0.0058

Panel aerodynamic characteristics		
$C_N' = 0.554$ $C_B' = 0.237$	$C_M' = 0.0196$ $x_{cp} = 21.5$	$y'_{cp} = 42.8$

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TABLE V.- TABULATION OF PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF THE D-558-I WING; WIND-UP TURN AT $M \approx 0.70$ - Continued

(c) $M = 0.706$; $C_{N_A} = 0.688$; $\delta_{a_R} = 0.5^\circ$ up

Orifice	Pressure coefficients						
	Row 1	Row 2	Row 3	Row 4	Row 5		Row 6
					Upper	Lower	
1	-------	-------	-------	-------	------	0.483	-------
2-3	2.684	2.712	2.782	2.694	-1.868	.863	2.622
4-5	1.658	2.552	2.597	2.510	-1.854	.732	2.703
6-7	1.640	2.387	2.333	2.308	-1.743	.555	2.136
8-9	1.456	2.189	2.140	2.115	-1.724	.390	1.361
10-11	1.182	1.307	1.796	1.737	-.879	.144	.631
12-13	-------	.719	.982	.892	-.437	.005	-------
14-15	.607	-------	-------	.354	-.426	-----	-------
16-17	-------	.410	.389	.403	-.514	-.044	-------
18-19	.465	.386	.360	.325	-.496	-.119	-------
20-21	.435	-------	.375	.298	-.426	-.119	-------
22-23	.263	.263	-------	-------	-.387	-.110	-------
24-25	-------	.290	.254	.211	-.277	-.084	.210
26-27	.217	.210	.235	.232	-.207	-.058	-------
28-29	.140	.140	.186	.140	-.154	.004	.175
30-31	.158	.116	-------	.070	-.084	.004	.140
32-33	-------	.202	-------	-------	-.031	.065	-------
34-35	.114	-------	.095	-------	.065	.021	.272
36-37	-------	.105	-------	.044	.051	.135	.140
38-39	.053	.063	.081	-------	.146	.195	.079
40	-------	-------	-------	-------	.153	-----	-------

Section aerodynamic characteristics						
c_n	0.594	0.660	0.746	0.683	0.605	0.523
$c_{m_{c/4}}$	0.0035	0.0180	0.0242	0.0348	0.0306	0.0013

Panel aerodynamic characteristics		
$C_N' = 0.631$ $C_B' = 0.275$	$C_M' = 0.0219$ $x_{cp} = 21.5$	$y'_{cp} = 43.5$

TABLE V.- TABULATION OF PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF THE D-558-I WING; WIND-UP TURN AT $M \approx 0.70$ - Continued

(d) $M = 0.705$; $C_{N_A} = 0.788$; $\delta a_R = 0.3^\circ$ up

Orifice	Pressure coefficients						
	Row 1	Row 2	Row 3	Row 4	Row 5		Row 6
					Upper	Lower	
1	-------	-------	-------	-------	------	0.358	-------
2-3	2.912	2.894	2.964	2.908	-2.006	.888	2.763
4-5	1.868	2.754	2.970	2.659	-1.978	.774	2.896
6-7	1.736	2.562	2.515	2.431	-1.876	.660	2.301
8-9	1.600	2.487	2.307	2.290	-1.848	.432	1.670
10-11	1.228	1.439	1.898	1.922	-1.171	.169	.772
12-13	-------	.851	1.231	1.225	-.884	.050	-------
14-15	.838	-------	-------	.733	-.445	-----	-------
16-17	-------	.400	.702	.509	-.480	-.021	-------
18-19	.456	.333	.290	.246	-.489	-.103	-------
20-21	.386	-------	.267	.254	-.436	-.094	-------
22-23	.263	.228	-------	-------	-.378	-.112	-------
24-25	-------	.254	.228	.202	-.296	-.077	.260
26-27	.217	.203	.196	.225	-.226	-.077	-------
28-29	.140	.150	.175	.149	-.173	.002	.225
30-31	.167	.130	-------	.088	-.112	.011	.193
32-33	-------	.175	-------	-------	-.068	.046	-------
34-35	.123	-------	.095	-------	.020	.011	.333
36-37	-------	.109	-------	.070	.011	.116	.172
38-39	.060	.074	.088	-------	.113	.176	.096
40	-------	-------	-------	-------	.125	-----	-------

Section aerodynamic characteristics						
c_n	0.657	0.704	0.818	0.772	0.709	0.621
$c_{m_{c/4}}$	0.0035	0.0287	0.0287	0.0367	0.0287	-0.0061

Panel aerodynamic characteristics		
$C_N' = 0.708$ $C_B' = 0.314$	$C_M' = 0.0246$ $x_{cp} = 21.5$	$y'_{cp} = 44.4$

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TABLE V.- TABULATION OF PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF THE D-558-I WING; WIND-UP TURN AT $M \approx 0.70$ - Concluded

(e) $M = 0.702$; $C_{N_A} = 0.883$; $\delta_{a_R} = 0.3^\circ$ down

Orifice	Pressure coefficients						
	Row 1	Row 2	Row 3	Row 4	Row 5		Row 6
					Upper	Lower	
1	-------	-------	-------	-------	------	0.225	-------
2-3	3.120	3.138	3.191	3.142	-2.222	.962	3.023
4-5	2.801	2.970	3.035	2.947	-2.165	.847	3.089
6-7	2.181	2.822	2.805	2.698	-2.063	.704	2.532
8-9	1.681	2.578	2.607	2.538	-2.055	.493	2.018
10-11	1.241	1.420	1.603	1.748	-1.679	.218	1.073
12-13	-------	1.232	1.372	1.381	-1.098	.083	-------
14-15	1.011	-------	-------	.950	-.634	-----	-------
16-17	-------	.709	.812	.762	-.562	.005	-------
18-19	.621	.515	.462	.364	-.474	-.101	-------
20-21	.525	-------	.355	.320	-.447	-.101	-------
22-23	.333	.320	-------	-------	-.389	-.110	-------
24-25	-------	.328	.257	.222	-.305	-.084	.316
26-27	.262	.198	.252	.227	-.261	-.084	-------
28-29	.204	.165	.234	.169	-.190	.030	.301
30-31	.230	.177	-------	.115	-.146	.014	.291
32-33	-------	.213	-------	-------	-.084	.067	-------
34-35	.178	-------	.167	-------	-.039	.058	.497
36-37	-------	.188	-------	-.009	-.023	.120	.245
38-39	.110	.135	.135	-------	.069	.193	.142
40	-------	-------	-------	-------	.094	-----	-------

Section aerodynamic characteristics						
c_n	0.767	0.812	0.907	0.838	0.839	0.761
$c_{m_{c/4}}$	-0.0052	0.0090	0.0180	0.0409	0.0277	-0.0184

Panel aerodynamic characteristics		
$C_N' = 0.810$ $C_B' = 0.363$	$C_M' = 0.0158$ $x_{cp} = 23.0$	$y'_{cp} = 44.8$

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TABLE VI.- TABULATION OF PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF THE D-588-I WING; WIND-UP TURN AT $M \approx 0.855$

(a) $M = 0.853$; $C_{N_A} = 0.306$; $\delta a_R = 0.2^\circ$ up

Orifice	Pressure coefficients						
	Row 1	Row 2	Row 3	Row 4	Row 5		Row 6
					Upper	Lower	
1	-------	-------	-------	-------	------	1.113	-------
2-3	0.736	0.822	0.878	0.885	-0.345	.452	0.859
4-5	.545	.742	.563	.827	-.424	.346	.945
6-7	.511	.714	.582	.568	-.402	.237	.438
8-9	.319	.560	.629	.574	-.512	.070	.310
10-11	.326	.231	.501	.461	-.651	-.143	.382
12-13	-------	.410	.535	.542	-.633	-.235	-------
14-15	.485	-------	-------	.436	-.712	-----	-------
16-17	-------	.330	.364	.382	-.795	-.417	-------
18-19	.393	.377	.411	.309	-.902	-.475	-------
20-21	.386	-------	.404	.309	-.873	-.452	-------
22-23	.193	.321	-------	-------	-.925	-.520	-------
24-25	-------	.017	.551	.079	-.688	-.491	.391
26-27	.238	.292	.342	.302	-.396	-.166	-------
28-29	.197	.299	.321	.264	-.312	-.048	.076
30-31	.191	.281	-------	.236	-.148	-.025	.022
32-33	-------	.174	-------	-------	.023	.025	-------
34-35	.124	.162	.065	-------	.211	.031	.101
36-37	-------	.133	-------	.186	.129	.149	.025
38-39	.054	.085	.052	-------	.222	.216	-.017
40	-------	-------	-------	-------	.244	-----	-------

Section aerodynamic characteristics						
c_n	0.288	0.302	0.371	0.334	0.310	0.286
$c_{m_{c/4}}$	-0.0367	-0.0367	-0.0380	-0.0351	-0.0151	-0.0222

Panel aerodynamic characteristics		
$C_N' = 0.312$ $C_B' = 0.141$	$C_M' = -0.0312$ $x_{cp} = 35.0$	$y'_{cp} = 45.2$

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TABLE VI.- TABULATION OF PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF THE D-558-I WING; WIND-UP TURN AT $M \approx 0.855$ - Continued

(b) $M = 0.858$; $C_{N_A} = 0.404$; $\delta a_R = 0.1^\circ$ up

Orifice	Pressure coefficients						
	Row 1	Row 2	Row 3	Row 4	Row 5		Row 6
					Upper	Lower	
1	-------	-------	-------	-------	------	1.073	-------
2-3	1.000	1.160	1.430	1.114	-0.606	.565	1.164
4-5	.774	1.115	1.040	1.117	-.645	.461	1.232
6-7	.714	.990	.870	.924	-.584	.346	.857
8-9	.523	.888	.840	.770	-.663	.170	.442
10-11	.459	.402	.712	.638	-.713	-.077	.461
12-13	-------	.538	.710	.662	-.754	-.195	-------
14-15	.626	-------	-------	.584	-.848	-----	-------
16-17	-------	.518	.506	.571	-.901	-.366	-------
18-19	.511	.516	.490	.525	-.951	-.385	-------
20-21	.479	-------	.499	-.083	-.934	-.484	-------
22-23	.248	.242	-------	-------	-.932	-.533	-------
24-25	-------	-.187	-.055	-.220	-.539	-.588	.196
26-27	.176	.191	.275	.275	-.473	-.429	-------
28-29	.203	.283	.314	.286	-.396	-.077	.134
30-31	.231	.325	-------	.297	-.357	-.039	.044
32-33	-------	.286	-------	-------	-.151	0	-------
34-35	.127	.286	.187	-------	-.017	.038	.204
36-37	-------	.277	-------	.363	-.008	.098	.057
38-39	.145	.165	.123	-------	.080	.170	-.005
40	-------	-------	-------	-------	.120	-----	-------

Section aerodynamic characteristics						
c_n	0.368	0.401	0.462	0.424	0.424	0.291
$c_{m_{c/4}}$	-0.0357	-0.0406	-0.0322	-0.0258	-0.0258	-0.0119

Panel aerodynamic characteristics		
$C_N' = 0.391$ $C_B' = 0.171$	$C_M' = -0.0311$ $x_{cp} = 32.8$	$y'_{cp} = 43.8$

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TABLE VI.- TABULATION OF PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF THE D-558-I WING; WIND-UP TURN AT $M \approx 0.855$ - Continued

(c) $M = 0.860$; $C_{N_A} = 0.510$; $\delta_{a_R} = 0.2^\circ$ down

Orifice	Pressure coefficients						
	Row 1	Row 2	Row 3	Row 4	Row 5		Row 6
					Upper	Lower	
1	-------	-------	-------	-------	------	0.996	-------
2-3	1.615	1.458	1.542	1.430	-.791	.692	1.413
4-5	.977	1.386	1.346	1.363	-.811	.599	1.477
6-7	.982	1.248	1.190	1.188	-.764	.451	1.105
8-9	.729	1.153	1.108	1.068	-.831	.266	.819
10-11	.589	.655	.904	.867	-.783	.015	.557
12-13	-------	.655	.910	.761	-.894	-.134	-------
14-15	.834	-------	-------	.755	-.939	-----	-------
16-17	-------	.707	.854	.693	-1.022	-.217	-------
18-19	.573	.387	.659	.098	-1.076	-.361	-------
20-21	.227	-------	.533	-.065	-.995	-.476	-------
22-23	-.055	-.038	-------	-------	-.643	-.520	-------
24-25	-------	-.153	-.038	-.098	-.563	-.547	.251
26-27	.151	.231	.242	.273	-.498	-.307	-------
28-29	.186	.303	.262	.354	-.416	-.078	.210
30-31	.207	.323	-------	.349	-.192	-.056	.109
32-33	-------	.278	-------	-------	-.169	-.001	-------
34-35	.142	.349	.262	-------	-.083	.064	.322
36-37	-------	.386	-------	.409	-.067	.102	.127
38-39	.227	.299	.203	-------	.018	.169	.060
40	-------	-------	-------	-------	.053	-----	-------

Section aerodynamic characteristics						
c_n	0.425	0.477	0.568	0.499	0.535	0.408
$c_{m_{c/4}}$	-0.0274	-0.0415	-0.0361	-0.0393	-0.0306	-0.0232

Panel aerodynamic characteristics		
$C_N' = 0.481$ $C_B' = 0.218$	$C_M' = -0.0357$ $x_{cp} = 32.4$	$y'_{cp} = 45.3$

TABLE VI.- TABULATION OF PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF THE D-558-I WING; WIND-UP TURN AT $M \approx 0.855$ - Continued

(d) $M = 0.856$; $C_{N_A} = 0.615$; $\delta_{a_R} = 0.1^\circ$ up

Orifice	Pressure coefficients						
	Row 1	Row 2	Row 3	Row 4	Row 5		Row 6
					Upper	Lower	
1	-------	-------	-------	-------	------	0.890	-------
2-3	1.874	1.867	1.766	1.654	-0.947	.754	1.612
4-5	1.117	1.634	1.581	1.564	-.954	.646	1.668
6-7	1.133	1.515	1.401	1.384	-.913	.508	1.294
8-9	.896	1.373	1.330	1.286	-.971	.390	1.044
10-11	.704	.828	1.081	1.036	-.867	.041	.659
12-13	-------	.812	1.048	.998	-.854	-.091	-------
14-15	.981	-------	-------	.604	-1.066	-----	-------
16-17	-------	.861	.987	.496	-1.103	-.191	-------
18-19	.311	.273	.709	.153	-1.190	-.362	-------
20-21	.257	-------	.412	.044	-.869	-.460	-------
22-23	.009	.011	-------	-------	-.668	-.488	-------
24-25	-------	.005	.076	.120	-.607	-.482	.290
26-27	.183	.259	.257	.401	-.531	-.275	-------
28-29	.202	.307	.261	.343	-.357	-.128	.176
30-31	.267	.322	-------	.321	-.291	-.106	.131
32-33	-------	.305	-------	-------	-.263	-.074	-------
34-35	.273	.344	.253	-------	-.139	-.112	.332
36-37	-------	.379	-------	.371	-.117	-.035	.131
38-39	.248	.288	.222	-------	-.034	.110	.071
40	-------	-------	-------	-------	.003	-----	-------

Section aerodynamic characteristics						
c_n	0.499	0.564	0.647	0.568	0.609	0.470
$c_{m_{c/4}}$	-0.0358	-0.0348	-0.0332	-0.0374	-0.0238	-0.0219

Panel aerodynamic characteristics		
$C_N' = 0.559$ $C_B' = 0.249$	$C_M' = -0.0308$ $x_{cp} = 30.5$	$y'_{cp} = 44.8$

TABLE VI.- TABULATION OF PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF THE D-558-I WING; WIND-UP TURN AT $M \approx 0.855$ - Continued

(e) $M = 0.855$; $C_{N_A} = 0.719$; $\delta a_R = 0.4^\circ$ up

Orifice	Pressure coefficients						
	Row 1	Row 2	Row 3	Row 4	Row 5		Row 6
					Upper	Lower	
1	-------	-------	-------	-------	------	0.779	-------
2-3	2.186	2.020	2.052	1.967	-1.107	.862	1.867
4-5	1.806	1.895	1.914	1.832	-1.109	.746	1.887
6-7	1.327	1.771	1.692	1.667	-1.054	.618	1.529
8-9	1.110	1.617	1.570	1.535	-1.127	.415	1.269
10-11	.857	1.012	1.289	1.271	-.953	.113	.854
12-13	-------	1.008	1.220	1.201	-.783	-.016	-------
14-15	.742	-------	-------	1.038	-.663	-----	-------
16-17	-------	.826	1.011	1.013	-.675	-.138	-------
18-19	.413	.358	.484	.501	-.636	-.312	-------
20-21	.379	-------	.463	.402	-.625	-.345	-------
22-23	.093	.044	-------	-------	-.635	-.351	-------
24-25	-------	.220	.424	.253	-.653	-.350	.152
26-27	.245	.249	.379	.374	-.636	-.350	-------
28-29	.281	.295	.359	.253	-.631	-.152	.068
30-31	.330	.308	-------	.220	-.625	-.146	.110
32-33	-------	.297	-------	-------	-.567	-.124	-------
34-35	.341	.352	.304	-------	-.455	-.278	.413
36-37	-------	.399	-------	.374	-.426	-.047	.211
38-39	.300	.328	.271	-------	-.367	.138	.154
40	-------	-------	-------	-------	-.236	-----	-------

Section aerodynamic characteristics						
c_n	0.572	0.654	0.769	0.741	0.662	0.528
$c_{m_{c/4}}$	-0.0419	-0.0361	-0.0467	-0.0419	-0.0564	-0.0155

Panel aerodynamic characteristics		
$C_N' = 0.653$ $C_B' = 0.291$	$C_M' = -0.0383$ $x_{cp} = 30.9$	$y'_{cp} = 44.5$

TABLE VI.- TABULATION OF PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF THE D-558-I WING; WIND-UP TURN AT $M \approx 0.855$ - Concluded

(f) $M = 0.847$; $C_{N_A} = 0.796$; $\delta_{a_R} = 0.1^\circ$ down

Orifice	Pressure coefficient						
	Row 1	Row 2	Row 3	Row 4	Row 5		Row 6
					Upper	Lower	
1	-------	-------	-------	-------	------	0.658	-------
2-3	2.372	2.230	2.252	2.187	-1.290	.934	2.098
4-5	2.221	2.098	2.158	2.052	-1.265	.811	2.107
6-7	1.445	1.974	1.949	1.856	-1.202	.688	1.725
8-9	1.230	1.806	1.770	1.724	-1.270	.482	1.435
10-11	.915	1.143	1.422	1.455	-.944	.203	1.055
12-13	-------	1.161	1.219	1.374	-.732	.044	-------
14-15	.725	-------	-------	1.172	-.667	-----	-------
16-17	-------	.908	.808	1.027	-.679	-.081	-------
18-19	.552	.418	.624	.468	-.673	-.249	-------
20-21	.502	-------	.607	.407	-.662	-.260	-------
22-23	.277	.195	-------	-------	-.679	-.299	-------
24-25	-------	.273	.564	.335	-.679	-.283	.011
26-27	.341	.279	.478	.430	-.656	-.305	-------
28-29	.340	.324	.404	.323	-.656	-.143	.134
30-31	.368	.339	-------	.268	-.651	-.154	.230
32-33	-------	.262	-------	-------	-.610	-.143	-------
34-35	.351	.366	.286	-------	-.539	-.333	.513
36-37	-------	.437	-------	.323	-.534	-.082	.312
38-39	.310	.346	.290	-------	-.476	.134	.218
40	-------	-------	-------	-------	-.361	-----	-------

Section aerodynamic characteristics						
c_n	0.647	0.743	0.839	0.817	0.758	0.597
$c_{m_{c/4}}$	-0.0525	-0.0425	-0.0515	-0.0403	-0.0740	-0.0235

Panel aerodynamic characteristics		
$C_N' = 0.736$ $C_B' = 0.327$	$C_M' = -0.0454$ $x_{cp} = 31.2$	$y'_{cp} = 44.5$

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TABLE VII.- TABULATION OF PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF THE D-558-I WING; WIND-UP TURN AT $M \approx 0.88$

(a) $M = 0.885$; $C_{N_A} = 0.311$; $\delta a_R = 0.2^\circ$ down

Orifice	Pressure coefficients						
	Row 1	Row 2	Row 3	Row 4	Row 5		Row 6
					Upper	Lower	
1	-------	-------	-------	-------	------	1.107	-------
2-3	o.848	1.014	1.089	0.941	-.455	.550	1.007
4-5	.684	.865	.881	.965	-.508	.446	1.089
6-7	.625	.853	.700	.762	-.460	.315	.595
8-9	.423	.762	.714	.644	-.546	.168	.284
10-11	.387	.356	.625	.525	-.657	-.040	.427
12-13	-------	.501	.599	.628	-.673	-.171	-------
14-15	.540	-------	-------	.516	-.762	-----	-------
16-17	-------	.434	.454	.456	-.833	-.377	-------
18-19	.446	.436	.396	.381	-.893	-.452	-------
20-21	.427	-------	.444	.307	-.804	-.516	-------
22-23	.230	.347	-------	-------	-.500	-.556	-------
24-25	-------	-.114	.134	.134	-.427	-.615	.159
26-27	-.212	-.196	-.020	.069	-.412	-.640	-------
28-29	-.298	-.310	-.238	-.163	-.417	-.610	-.071
30-31	.010	-.071	-------	-.342	-.427	-.496	-.232
32-33	-------	.193	.212	-------	-.407	-.099	-------
34-35	.213	.242	.319	-------	-.313	.054	.193
36-37	-------	.264	-------	.178	-.280	.104	.093
38-39	.159	.204	.308	-------	-.149	.159	.050
40	-------	-------	-------	-------	-.031	-----	-------

Section aerodynamic characteristics						
c_n	0.273	0.298	0.367	0.303	0.339	0.222
$c_{m_{c/4}}$	-0.0161	-0.0132	-0.0274	0.0013	-0.0219	0.0003

Panel aerodynamic characteristics		
$C_N' = 0.302$ $C_B' = 0.134$	$C_M' = -0.0130$ $x_{cp} = 29.3$	$y'_{cp} = 44.4$

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TABLE VII.- TABULATION OF PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF THE D-558-I WING; WIND-UP TURN AT $M \approx 0.88$ - Continued

(b) $M = 0.885$; $C_{N_A} = 0.389$; $\delta a_R = 0.5^\circ$ up

Orifice	Pressure coefficients						
	Row 1	Row 2	Row 3	Row 4	Row 5		Row 6
					Upper	Lower	
1	-------	-------	-------	-------	------	1.060	-------
2-3	1.465	1.274	1.357	1.137	-0.627	.645	1.259
4-5	.882	1.215	1.166	1.205	-.661	.537	1.303
6-7	.872	1.122	1.015	1.049	-.624	.414	.966
8-9	.606	.988	.941	.926	-.708	.248	.674
10-11	.517	.559	.764	.720	-.723	-.022	.510
12-13	-------	.608	.798	.753	-.782	-.131	-------
14-15	.721	-------	-------	.659	-.845	-----	-------
16-17	-------	.553	.678	.608	-.943	-.321	-------
18-19	.578	.549	.539	.515	-.639	-.345	-------
20-21	.454	-------	.537	.225	-.487	-.453	-------
22-23	.127	-.108	-------	------	-.445	-.492	-------
24-25	-------	-.206	-.044	-.078	-.458	-.570	.235
26-27	-.204	-.182	-.123	.104	-.433	-.619	-------
28-29	-.284	-.251	-.153	-.098	-.453	-.570	-.125
30-31	-.098	-.300	-------	-.284	-.453	-.619	-.319
32-33	-------	.211	.098	-------	-.453	-.183	-------
34-35	.221	.323	.235	-------	-.355	-.036	.181
36-37	-------	.378	-------	.206	-.345	.052	.123
38-39	.229	.325	.218	-------	-.247	.096	.069
40	-------	-------	-------	-------	-.174	-----	-------

Section aerodynamic characteristics						
c_n	0.338	0.358	0.425	0.377	0.393	0.302
$c_{m_{c/4}}$	-0.0058	-0.0061	-0.0061	0.0061	-0.0138	0.0077

Panel aerodynamic characteristics		
$C_N' = 0.346$ $C_B' = 0.149$	$C_M' = -0.0027$ $x_{cp} = 25.8$	$y'_{cp} = 42.9$

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TABLE VII.- TABULATION OF PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF THE D-558-I WING; WIND-UP TURN AT $M \approx 0.88$ - Continued

(c) $M = 0.882$; $C_{N_A} = 0.506$; $\delta a_R = 0.4^\circ$ up

Orifice	Pressure coefficients						
	Row 1	Row 2	Row 3	Row 4	Row 5		Row 6
					Upper	Lower	
1	-------	-------	-------	-------	------	0.959	-------
2-3	1.763	1.546	1.630	1.521	-0.819	.737	1.501
4-5	.993	1.496	1.440	1.445	-.844	.620	1.528
6-7	1.046	1.392	1.288	1.280	-.805	.496	1.193
88-9	.804	1.255	1.182	1.174	-.863	.310	.961
10-11	.637	.766	.974	.936	-.827	.044	.630
12-13	-------	.770	.965	.925	-.918	-.079	-------
14-15	.903	-------	-------	.781	-.979	-----	-------
16-17	-------	.783	.901	.441	-1.060	-.182	-------
18-19	.378	.272	.766	.087	-1.118	-.338	-------
20-21	.190	-------	.351	-.039	-1.089	-.450	-------
22-23	-.062	-.005	-------	-------	-.701	-.493	-------
24-25	-------	-.116	-.005	-.092	-.639	-.537	.196
26-27	-.060	-.099	-.064	.087	-.519	-.614	-------
28-29	-.136	-.167	-.174	-.058	-.421	-.527	-.085
30-31	-.019	-.157	-------	-.097	-.343	-.605	-.248
32-33	-------	.291	-.077	-------	-.261	-.469	-------
34-35	.252	.356	.184	-------	-.140	-.208	.242
36-37	-------	.397	-------	.393	-.226	-.043	.236
38-39	.260	.341	.242	-------	-.071	.041	.179
40	-------	-------	-------	-------	-.029	-----	-------

Section aerodynamic characteristics						
c_n	0.413	0.465	0.525	0.452	0.495	0.382
$c_{m_{c/4}}$	-0.0122	-0.0129	0.0003	-0.0042	0.0135	0.0010

Panel aerodynamic characteristics		
$C_N' = 0.454$ $C_B' = 0.201$	$C_M' = -0.0024$ $x_{cp} = 25.5$	$y'_{cp} = 44.3$

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TABLE VII.- TABULATION OF PRESSURE COEFFICIENTS AND AERODYNAMIC CHARACTERISTICS OF THE D-558-I WING; WIND-UP TURN AT $M \approx 0.88$ - Concluded

(d) $M = 0.880$; $C_{N_A} = 0.604$; $\delta_{a_R} = 0.1^\circ$ down

Orifice	Pressure coefficients						
	Row 1	Row 2	Row 3	Row 4	Row 5		Row 6
					Upper	Lower	
1	-------	-------	-------	-------	------	0.896	-------
2-3	1.817	1.718	1.799	1.689	-0.949	.803	1.655
4-5	1.252	1.640	1.601	1.601	-.942	.682	1.707
6-7	1.111	1.542	1.452	1.421	-.895	.555	1.347
8-9	.906	1.396	1.334	1.314	-.971	.362	1.126
10-11	.708	.849	1.095	1.067	-.905	.085	.723
12-13	-------	.907	1.069	1.030	-.984	-.041	-------
14-15	1.009	-------	-------	.427	-1.050	-----	-------
16-17	-------	.872	1.003	.393	-1.118	-.150	-------
19-19	.325	.286	.795	.155	-1.182	-.308	-------
20-21	.229	-------	.378	.024	-1.099	-.439	-------
22-23	.050	.063	-------	-------	-.722	-.468	-------
24-25	-------	-.034	.082	-.029	-.633	-.502	.290
26-27	.006	-.023	-.010	.175	-.498	-.609	-------
28-29	-.053	-.072	-.132	.019	-.366	-.483	.004
30-31	.218	.248	-------	-.019	-.313	-.546	-.194
32-33	-------	.359	.136	-------	-.260	-.245	-------
34-35	.315	.369	.254	-------	-.279	-.119	.315
36-37	-------	.406	-------	.475	-.255	.007	.254
38-39	.212	.338	.314	-------	-.148	.025	.180
40	-------	-------	-------	-------	-.095	-----	-------

Section aerodynamic characteristics						
c_n	0.487	0.554	0.621	0.512	0.586	0.470
$c_{m_{c/4}}$	-0.0254	-0.0261	-0.0193	-0.0142	-0.0064	-0.0068

Panel aerodynamic characteristics		
$C_N' = 0.537$ $C_B' = 0.238$	$C_M' = -0.0163$ $x_{cp} = 28.0$	$y'_{cp} = 44.3$

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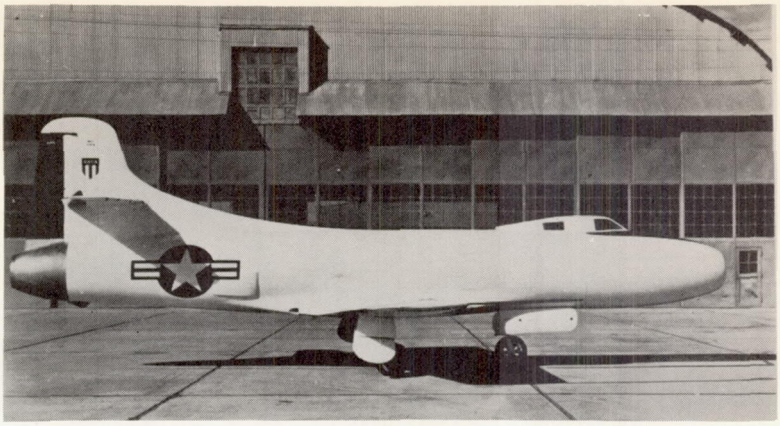
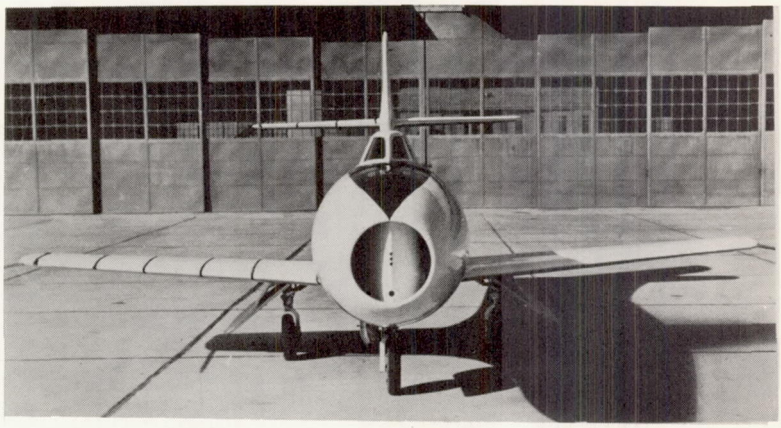
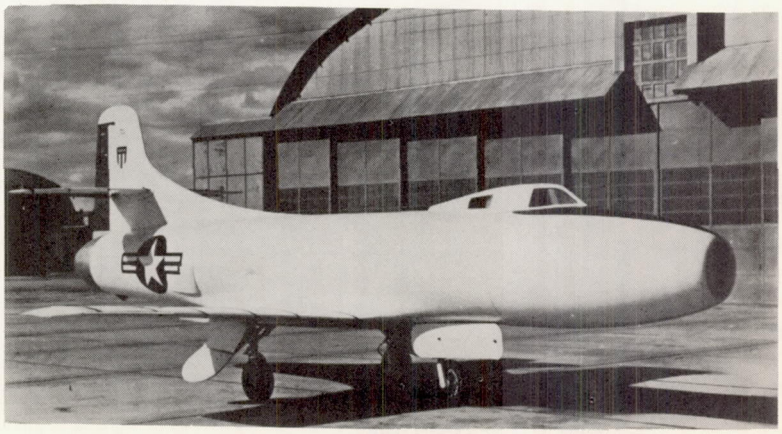


(a) Side view.



(b) Front view.



(c) Three-quarter view.

Figure 1.- Photographs of the Douglas D-558-I airplane.

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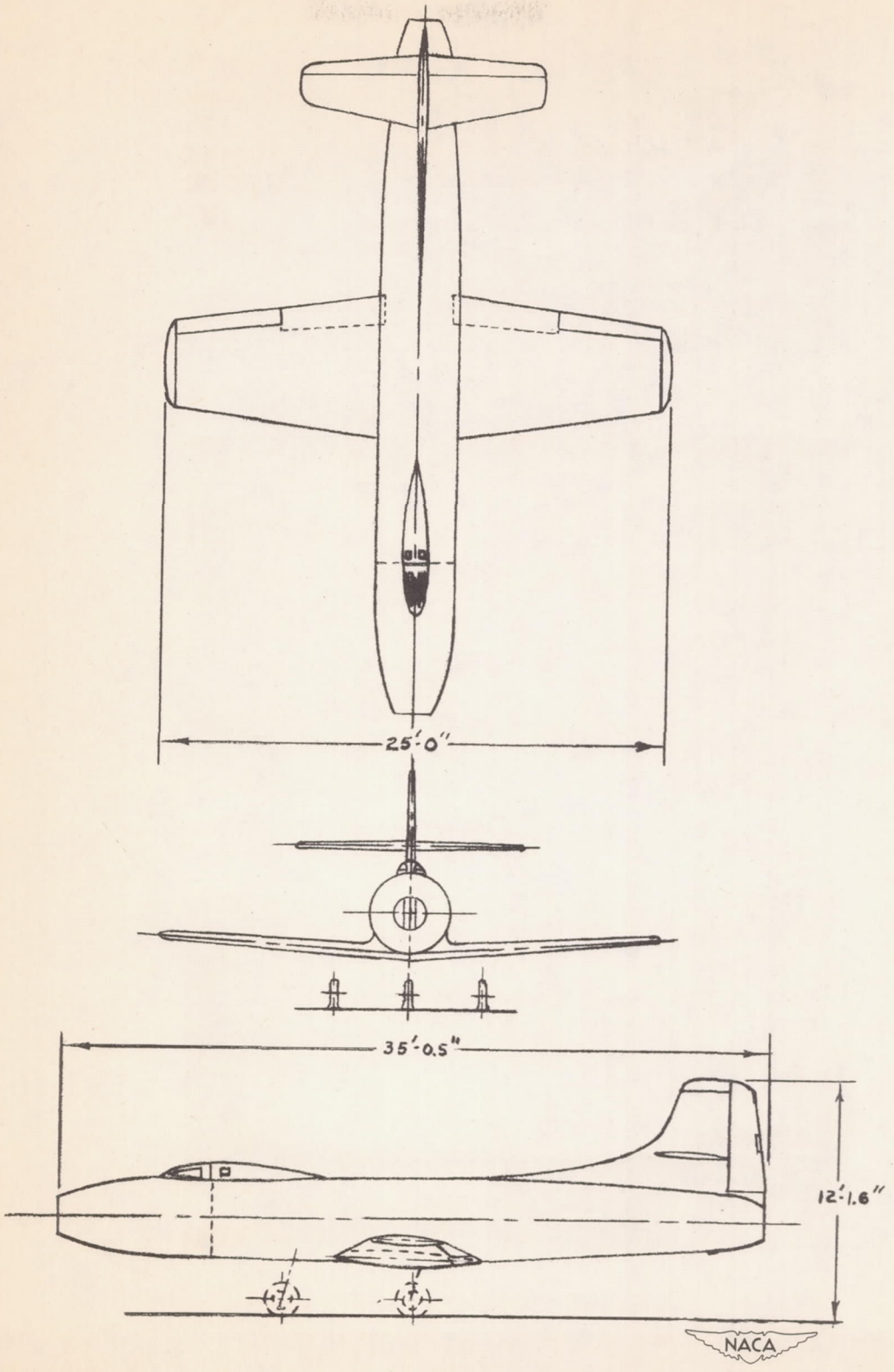

Figure 2.- Three-view drawing of the Douglas D-558-I airplane.